spread of ATL, but we were unable to extrapolate findings from animal models to human disease.

http://dx.doi.org/10.1016/j.ijid.2014.03.767

Type: Poster Presentation

Final Abstract Number: 45.028
Session: Parasitology and Parasitic Infections
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

High under-five case fatality rate in the recent malaria upsurge in Muleba, Tanzania

R.S. Kishimba, J. Mghamba, S. Sheuya*

Tanzania Ministry of Health/TFELTP, Dar es salaam, Tanzania, United Republic of

Background: Muleba is one of the malaria sentinel sites in a country. It is known to have several malaria outbreaks. The first outbreak occurred in 1997 with a case fatality ratio (CFR) of 3.7% and the second was in 2006, with CFR of 2.8%. On the 1st of June 2013, the Ministry received report of 123 cases with CFR of 7.3%, an increase in the number of admitted < 5 malaria cases from Muleba district. Tanzania FELTP conducted an investigation to confirm the existence of the outbreak, determine attributing factors and institute control measures.

Methods & Materials: We reviewed the weekly line list and medical records of admitted patients from the 1st epidemiology week of calendar year 2013 and interviewed 302 admitted fever-patients, parent, or care taker on bed net ownership and usage. Data was abstracted using a structured data collection check list. A total of 38 samples were taken for further investigations to rule out borrelia, yellow fever and dengue viral infection. Data was analysed using Microsoft Excel and Epi Info version 3.5.4

Results: From 9th – 23rd Epidemiology week, there were a total of 2,366 cases and 131 deaths (CFR = 5.5%); 86 (65.6%) due to malaria with majority 71 (82.6%) being < 5.

A total of 302 fever admitted cases were interviewed; out of 184 tested for malaria, 149 (81%) were positive. Majority 258 (85.4%) came from villages that were uncovered by Indoor Residual Spraying (IRS) intervention. About 179 (59.3%) reported to own mosquito bed nets. Majority 233 (77.2%) delayed seeking medical care and sought traditional herbs.

Of the 38 blood samples taken for analysis at the National Laboratory (NHL-QATC), 21 (55.3%) tested positive for malaria and all were negative for borrelia, dengue and yellow fever.

Conclusion: An outbreak ofmalaria was confirmed. Factors contributing to high CFR included late medical seeking behaviour, use of traditional herbs at home, poor bed net usage and lack of IRS intervention activities. There is a need to sensitize communities on early medical seeking behaviour and revitalizing other malaria control initiatives like IRS. Other causes of fever other than malaria should also be explored.

http://dx.doi.org/10.1016/j.ijid.2014.03.768

Type: Poster Presentation

Final Abstract Number: 45.029
Session: Parasitology and Parasitic Infections
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

Comparison of highland malaria in Burundi, Rwanda and Kenyan community health care centres

J. Kafkova[1,*], J. Suvada[2], M. Balazova[3], B. Silharova[4], H. Selkes[5], T. Raszonyi[5], G. Mikolasova[6], M. Komlosi[7], K. Molnarova[8], V. Krcmery[9], A. Mamova[10]

[1] *St. Elisabeth University, Rutowu, Burundi*
[2] *St. Charles Lwanga Hospital, Buikwe, Uganda*
[3] *Bl. Clémentine-Anuarita Healthcare Centre, Bratislava, Rwanda*
[4] *St. Elisabeth University College of Health Care and Social Sciences, Bratislava, Uganda*
[5] *Bl. Sara Salkazy Clinic, St. Elisabeth University Tropical Program, Rutowu, Burundi*
[6] *St. Elisabeth University College of Health Care and Social Sciences, Bratislava, Slovakia*
[7] *St. Raphael and St. Bakhita Healthcare Centre, Mihango, Kenya*
[8] *Bl. Clémentine-Anuarita Healthcare Centre, Bigugu, Rwanda*
[9] *Mary Immaculate Clinic, St. Elisabeth University (SEU) Tropical Program Yirol County, Mapuordit, South Sudan*
[10] *Bl. Clémentine-Anuarita Healthcare Centre, Gordhim, South Sudan*

Background: Highland (HL) malaria represents less than 5% of all malaria cases in Sub-Saharan Africa. Most of them however, are "imported" by local travel upcountry - from malaria endemic areas to mountains by visitors and local travellers. The "true" HL malaria in altitude higher than 2000 meters above sea (m.a.s.) level is rare. The aim of this communication is to compare proportion of malaria admissions in 3 community health care centres located in altitude above 2000 m a.s. and their clinical outcomes in Kenyan, Burundian and Rwanda.

Methods & Materials: Within last 3 years (2010,2011,2012) number of admissions in all 3 CHS (Bigugu, Rutowu, Eldoret) was similar with 8540 – 10 155 patients per centre per year. Malaria diagnosis was made microscopically (according to WHO guidelines) and was confirmed with rapid diagnostic test (RDT; according to manufacturer's instructions). Prortion of malaria cases was compared in all 3 centres located in 2250 m.a.s. (Bigugu), 2000 m.a.s. (Rutowu) and 2100 m.a.s. (Eldoret), respectively.

Results: Proportion of "true" HL malaria that means in those without travel history to down-land within last 2 months was correlating with altitude. It was lowest was in Bigugu (1,8%) in comparison to Eldoret (3,1%) and Rutowu (4,1%), however, the differences were not significant. Only cases with clinical symptoms, microscopically and RTD positive have been assessed. Concerning other infectious diseases in the centres, respiratory tract infections were responsible for 42-64% of all visits, and highest proportion correlated with altitude and was in Bigugu (Rwanda, 2250 m.a.s.).

Conclusion: Lowest proportion of HL malaria was in centre in Bigugu, Rwanda, which is located in highest altitude - 2250 m.a.s.

(1,8% of all admission) and was increased in Eldoret, Kenya (3,1%) and Rutowu, Burundi (4,1%) and it correlates with altitude. The "true" HL is still very rare when patients with travel history to highland are excluded.

http://dx.doi.org/10.1016/j.ijid.2014.03.769

Type: Poster Presentation

Final Abstract Number: 45.030
Session: Parasitology and Parasitic Infections
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

Changing profile of *Plasmodium vivax* malaria

M.E. Yeolekar*, A. Barua, S. Sukumaran, S. Dhariya

K.J.Somaiya Medical College and Hospital, Mumbai, India

Background: Malaria, endemic in India, tends to be a major contributor to morbidity and mortality globally. Of the various species, Plasmodium Falciparum is associated with serious prognosis,(morbidity and mortality) in a sizeable number of patients. Chloroquine resistance was an important clinical issue; the current issue is that of an apparently changing scenario with rising number of P.Vivax malaria cases, associated with severity of complications. The observational study is aimed to find out whether there is change in P.Vivax malaria features and how it influences management.

Methods & Materials: An observational study conducted at a teaching hospital in central metropolitan Mumbai, India during the monsoon months (June-October 2013).

Febrile patients admitted from the medical outdoor and emergency service form the basis of this study. Patients with moderate to severe degree fever, with chills, localized and generalized body ache, varying degrees of weakness/fatigue and malaise/lethargy, vomiting suspected clinically to be suffering from malaria were tested - by peripheral smear examination/malaria specific Antigen. Other investigations included total and differential count, liver function tests- mainly Serum Bilirubin, Transaminases, renal function tests (Serum Creatinine). Haemodynamic Instability (hypotension), thrombocytopenia with manifest bleeding, affected renal function singly and in combination were the differentiating criteria towards critical care.

Results: A total of 41 cases (29 M, 12 F) of malaria were diagnosed- 39 were P.vivax and 2 were mixed malaria. As many as 32 patients were found to be thrombocytopenic (platelet count < 1.5 lakhs), the range being from 12,000 to 1.4 lakhs/cumm. Seven patients (17%) presented with hypotension and required ICU monitoring. 14 patients (34%) had deranged liver function test mostly in the form of transaminitis and 3 cases with renal insufficiency.3 patient presented with bleeding. 7 patients required platelet transfusion (4 units each of Random Donor Platelet transfusion) and 1 patient required platelet transfusion twice. Patients who tested positive for Dengue Antigen fared poorly. Fluctuating and decreasing platelet count without bleeding contributed to prolongation of hospital stay.

Conclusion: P.falciparum has been considered malignant malaria, P.vivax malaria particularly with thrombocytopenia has increased in incidence and is not considered benign any longer.

http://dx.doi.org/10.1016/j.ijid.2014.03.770

Type: Poster Presentation

Final Abstract Number: 45.031
Session: Parasitology and Parasitic Infections
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

Deworming HIV-infected pregnant women on ART demonstrates benefits in low haemoglobin trajectories

E.I. Ivan

Kigali Health institute,Kigali Rwanda, Kigali, Rwanda

Background: Co- infection with HIV and NTDs is common in sub Saharan Africa and findings from previous studies have suggested that anthelmintic treatment might delay disease progression in people with HIV. The aim was to determine the effect of anthelmintic therapy on HIV viral loads, CD4 cell counts and anemia among pregnant women with/without helminth co-infections among Rwandan women on antiretroviral theraphy.

Methods & Materials: From January 2010 and December 2011, we enrolled and followed up 1300 subjects, 650 randomised in targeted and 650 in untargeted intervention groups. All subjects were on ART regimen as part of their PMTCT treatment package. In targeted group we screened all and treated only helminth positive women. Untargeted group screened and treated all subjects irrespective of helminthic infection. CD4 cells counts trajectories and HIV viral load detection were measured between groups at baseline to post delivery treatment in a prospective cohort. Haemoglobin levels, prevalence rates and faecal egg count were also determined from baseline to post treatment time points among cohort groups

Results: There was a statistically significant difference in change of haemoglobin levels among subjects with Hb < 11 g/dL vs. > 11gd/L at post treatment visit in between treatment groups ($p = 0.04$) and a higher cure rate with reduced intensity for helminthic infection rates among positives. At visit 4, we found a marginal treatment effect ($p = 0.086$) in subjects with lower CD4 counts (<350; > 350) among negative untargeted vs. targeted groups. However, no significant difference was found in levels of viral load detection ($p = 0.5$ vs. 0.6) for all subjects at pre and post intervention visits. Treatment between targeted and untargeted groups demonstrated significant reduction in number of egg counts in both groups implying treatment effectiveness on infection over time.

Conclusion: Our findings demonstrated that less costly general de-worming versus targeted de-worming is not inferior in its beneficial effects of de-worming. Deworming does not, in our setting, statistically significantly delay HIV disease progression in women with HIV on ART, but with haemoglobin levels < 11 g/dL vs. > 11 g/dL ($p < 0.05$); without significant effect irrespective of the deworming method on CD4 cell count and viral load trajectories

http://dx.doi.org/10.1016/j.ijid.2014.03.771